association with the probability of seeing an endocrinologist: rates of specialist visits are the largest under the age of 25 (p<0.05). In addition, people treated with insulin and those with another endocrine disorder are more likely to see a specialist (p<0.001). In contrast, the newly diagnosed and patients followed by a general practitioner (GP) present lower probabilities of specialist visits (p<0.001). Moreover, the probability of specialist visit rises when the density of endocrinologists is large in the patients' neighbourhood, while it decreases with the distance (in kilometres) from the patients' house to the endocrinologist's office. Finally, the chances of seeing a specialist increase with income and decrease as the cost for a visit rises. **CONCLUSIONS:** Our results are consistent with previous literature showing evidence of the existence of a substitution effect between GPs and specialists in diabetes care. We show that financial barriers exist even in a population of patients receiving national health insurance coverage.

PDB159

PAYER'S PERCEPTIONS OF GLUCAGON KITS AIMED AT REDUCING ADMINISTRATION COMPLEXITY DURING SEVERE HYPOGLYCEMIC EVENTS

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OBJECTIVES: Severe hypoglycemic events (SHE) contribute to health care utilization for insulin-dependent diabetics, and may drive expenditures by health care payers. Rescue treatment for SHE includes glucagon kits, which are administered by caregivers and difficult to use. Consequently, there are high rates of unsuccessful administration, leading to increased health care service use. A new kit under development aims to ease the burden of administration by reducing the complexity. The new device aims to increase successful use and lower rates of health care service utilization. This study aimed to understand payers' receptivity to this value proposition. **METHODS:** Seven medical directors from US payers were interviewed, representing commercial, Medicare, Medicaid and other covered lives. The interview was designed to understand plans' focus on diabetes and hypoglycemia, coverage/reimbursement of current kits, and impressions of characteristics of the new kit. **RESULTS:** The prevention of SHE is not a concern for insurers; the risk of SHE is largely a type 1 problem, representing a small subset of their overall diabetic population. While payers are confident in current kits' effectiveness, they are not focused on managing access to such a low-volume treatment. Current kits are covered by insurers without restrictions, and contracting is not prevalent due to low volume. Payers believe the new kit will be an improvement over current kits, but do not believe it will reduce the cost of SHE. **CONCLUSIONS:** Payers feel that the new kit will be an improvement over currently available kits, but are skeptical that the ease of use will translate into lower health care service use. Additionally, SHE is not a major cost driver among their diabetic population; therefore, SHE is not a high-priority condition. Consequently, for optimal market access and reimbursement, the new kit must demonstrate significant reductions in high-cost health care utilization (e.g., ED, hospitalizations) to justify a premium price without coverage restrictions.

PDB160

AN OBSERVATIONAL COHORT STUDY OF DIABETES-ASSOCIATED SECONDARY HEALTH CARE UTILISATION IN PATIENTS WITH TYPE 2 DIABETES PRESCRIBED DUAL COMBINATION THERAPY WITH ORAL ANTI-HYPERGLYCAEMIC AGENTS IN THE UK

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OBJECTIVES: The primary objective was to assess the impact of using 'metformin plus sulphonylureas' (Met+SU) in comparison with 'metformin plus other oral anti-hyperglycaemic agents' (Met+OHA) in patients with Type 2 Diabetes (T2D) on diabetes-associated secondary health care utilisation in the UK. The secondary objectives included investigating individual components of the primary objective. **METHODS:** This retrospective cohort study used data from the Clinical Practice Research Datalink (CPRD) linked to Hospital Episodes Statistics. Adults (≥40 years) with T2D initiated on dual therapy with Met+SU or Met+OHA following metformin monotherapy were identified during the period April 2003–March 2012 and comprised the two study cohorts. Propensity scores were estimated and Met+SU patients caliper matched to Met+OHA patients to balance the covariates (including HbA1C and duration of diabetes at baseline). Diabetes-associated secondary health care utilisation (inpatient admissions and outpatient visits) were measured from >6 months post-initiation of dual therapy until treatment change or end of follow-up. Outcomes were calculated as rate ratios (RR), adjusted for over dispersion using negative binomial regression and propensity score for covariates. **RESULTS:** 14,416 patients in total were identified and in the directly matched analysis, 1,704 patients were included in each cohort. For the primary objective, the Met+SU cohort had a numerically higher rate of diabetes-related secondary health care utilisation than Met+OHAs (adjusted RR 1.12, 95% confidence interval [95%CI]: 0.97-1.29). For the secondary endpoints examining individual components, the adjusted RR for Met+SU cohort for inpatient admissions was 1.34 (95%CI 0.92–1.96) and 1.10 (95%CI 0.95-1.28) for outpatient visits. Macrovascular complications, accounting for 68.7% of inpatient admissions, occurred at a significantly higher rate in the Met+SU cohort than Met+OHA (adjusted RR 1.77, 95%CI: 1.15-2.71). **CONCLUSIONS:** Glucose-lowering combination therapy with metformin plus sulphonylurea is associated with a directionally higher rate of secondary health care utilisation than metformin plus other oral anti-hyperglycaemic agents.

PDB161

FACTORS ASSOCIATED WITH WEIGHT GAIN AND HYPOGLYCAEMIA AND THE IMPACT UPON HOSPITALISATION IN TYPE 2 DIABETES PATIENTS MANAGED WITH METFORMIN PLUS SULPHONYLUREA

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OBJECTIVES: The relationship between resource utilisation and patient phenotype in type 2 diabetes (T2D) is not well characterised. This study aimed to assess factors associated with weight gain (WG) and the occurrence of hypoglycaemia in T2D patients managed with metformin plus sulfonylurea (M+S) and any associated impact upon hospital resource utilisation. **METHODS:** The study was a retrospective cohort study using the UK Clinical Practice Research Datalink (CPRD) and the Hospital Episode Statistics (HES) database. The association between phenotypic factors at baseline (therapy escalation from metformin to M+S) with WG (> 2kg weight change over 12 months) and presence of any recorded hypoglycaemia over 12 months following therapy escalation was assessed using logistic regression. Hospitalisation associated with increasing body mass index (BMI) and hypoglycaemia was also assessed. **RESULTS:** A total of 11,071 patients met the study inclusion/exclusion criteria. WG was observed in 28.35% of patients and was significantly associated with baseline age (OR=0.99), female gender (OR=0.87), baseline weight (OR=1.003) and HbA1c (OR=1.06). Hypoglycaemia occurred in 1.3% of patients and was significantly associated with duration of diabetes (OR=1.04), baseline HbA1c (OR=0.86) and prior complications status (OR=1.92). Hospitalisation occurred in 10% of patients and was significantly associated with BMI (OR=1.02) but not hypoglycaemia. The mean number of hospital admissions over the follow-up period was 1.7, 1.8, 1.9 and 3.1 in those with BMIs at the time of admission in the normal, overweight, obese and morbidly obese categories respectively. **CONCLUSIONS:** This real-world observational analysis suggests there are identifiable phenotypic characteristics predictive of WG and hypoglycaemia. This study also shows a general relationship between increasing BMI and hospitalisation that may not be adequately captured in widely used vascular risk equations such as UKPDS in which BMI has minimal influence on risk. Consequently, the value of diabetes management strategies that minimise WG may be underestimated.

PDB162

THE USE OF REAL WORLD DATA IN THE DECISION-MAKING PROCESS: AN EXAMPLE USING BLOOD GLUCOSE TEST STRIP USE IN PATIENTS WITH TYPE 2 DIABETES IN IRELAND

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OBJECTIVES: Frequency of self-monitoring of blood glucose (SMBG) varies in patients with type 2 diabetes mellitus (T2DM) and there is debate as to the true benefit it plays in the management of the condition. The aim of this study was to compare the frequency of SMBG using patient medication record (PMR) dispensed data, with self-reported data, and to assess the relationship between type of glucose-lowering therapy to SMBG frequency among patients with T2DM dispensed glucose test strips. **METHODS:** Patients with T2DM were identified in community-pharmacies (n=116) using PMRs in 2012. Patients who consented to participation were surveyed in a face-to-face interview where self-reported (SR) frequency of SMBG was determined. Dispensed data were classified by the mechanism of action of the blood glucose lowering regimen, (secretagogues vs. sensitisers). Test strip use over a 12 month period was calculated and compared to SR use from the patient survey. Analysis was performed in MS Excel® and SAS®. **RESULTS:** Data from 484 patients were analysed (mean age 65yrs). Sensitising agents alone accounted for 45% of the cohort, secretagogues alone - 8%, a combination of both - 42%, and diet 5%. Approximately 52% of patients reported frequency of SMBG as once or twice daily vs 56% in the dispensed data. 13% of patients reported a frequency of at least 3 times daily vs 21% for PMR data. There was no statistically significant difference in SR frequency among those on the various glucose-lowering regimens. No correlations were found between frequency of use and age, gender, place of residence or number of prescribed medicines. **CONCLUSIONS:** Results from this study highlight (i) differences in frequency of blood glucose monitoring between dispensed data and SR data and (ii) the difficulty in accurately capturing this type of data. A reliance on either type of data alone may be insufficient to accurately inform decision making.

PDB163

COST OF SEVERE HYPOGLYCAEMIA IN HOSPITALIZED PATIENTS IN POLAND- IS IT FINANCED AND REPORTED IN A RIGHT WAY?

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OBJECTIVES: Hypoglycaemia is common in diabetic patients, often as a side effect of a treatment. Its occurrence can influence patients' professional life and generate extra direct costs to the health care system. Severe (requiring another person's assistance) hypoglycaemic events (SHEs), especially leading to hospitalisation, are associated with the highest burden and for that reason their real frequency and costs should be calculated properly. The aim of the study was to assess the accuracy of reporting of hypoglycaemia to the National Health Fund in Poland. **METHODS:** A combination of prospective and retrospective designs was applied. A detailed retrospective analysis of 117 hospitalised patients' case histories was performed from the period of February-March 2013. In addition, prospectively, in March and April 2013, 45 patients were interviewed and their clinical records were analysed. Information was collected in special case report forms. Real hospitalisation costs were also calculated. **RESULTS:** In the retrospective arm hypoglycaemia affected 42 patients (55% of type 1 and 25% of type 2) and 85 SHEs were recorded. Only 2 patients were reported in the hypoglycaemia DRG group compared to a broader diabetes/hyperglycaemia DRG group, where the financing level is higher. A financial difference equal to 7,082 EUR was generated due to more favourable classification of these cases. In the prospective arm 20 patients experienced hypoglycaemia, whereas only one was coded as hypoglycaemic. It has generated 2,247 EUR difference. Even with this financially more favourable, (still clinically justified but less precise) coding hypoglycaemic patients generated losses equal to 23,628 EUR in retrospective and 5,053 EUR in prospective group. **CONCLUSIONS:** Our study provided a direct proof